

AMENDMENTS TO THE CLAIMS

1. (currently amended): A liquid/liquid hydrocyclone liner comprising:
a head section having a fluid inlet and overflow outlet, the head section providing
an involute formed primarily of a first material having a first resistance to erosion;
a separation section having an underflow outlet, the separation section being
formed primarily of a second material having a second resistance to erosion; and
wherein
the first resistance to erosion is generally greater than the second resistance to
erosion.
2. (original): The hydrocyclone liner of claim 1 wherein the head section and
separation section are removably affixed to one another.
3. (original): The hydrocyclone liner of claim 1 further comprising a reinforcement
layer disposed upon the separation section.
4. (original): The hydrocyclone liner of claim 3 wherein the reinforcement layer is
comprised of a fiber-reinforced epoxy.
5. (original): The hydrocyclone liner of claim 4 wherein the fiber-reinforced epoxy is
reinforced with carbon fibers.
6. (original): The hydrocyclone liner of claim 4 wherein the fiber-reinforced epoxy is
reinforced with glass fibers.

7. (original): The hydrocyclone liner of claim 4 wherein the fiber-reinforced epoxy contains a plurality of fibers that are disposed axially within the epoxy to provide resistance to bending of the separation section.
8. (original): The hydrocyclone of claim 3 wherein the reinforcement layer is formed of a sprayed on material.
9. (original): The hydrocyclone liner of claim 1 wherein the separation section comprises a pair of tubular portions that are interconnected by a tubular joint member.
10. (original): The hydrocyclone liner of claim 1 wherein the first material comprises tungsten carbide.
11. (original): The hydrocyclone liner of claim 1 wherein the first material comprises silicon carbide.
12. (original): The hydrocyclone liner of claim 1 wherein the second material comprises ceramic.
13. (original): The hydrocyclone liner of claim 1 wherein the second material comprises surface engineered stainless steel.
14. (original): The hydrocyclone liner of claim 13 wherein the second material is surface engineered by case hardening.

15. (original): The hydrocyclone liner of claim 13 wherein the second material is surface engineered by coating.
16. (currently amended): A liquid/liquid hydrocyclone liner comprising:
a head section having a fluid inlet and overflow outlet; and
a separation section having an underflow outlet, the separation section being removably affixed to the head section, wherein the head section is formed of a material that provides a greater erosion resistance than that provided by the separation section.
17. (original): The hydrocyclone liner of claim 16 further comprising an external structural support for the separation section.
18. (canceled)
19. (original): The hydrocyclone liner of claim 16 wherein the head section is substantially formed of tungsten carbide.
20. (original): The hydrocyclone liner of claim 16 wherein the head section is substantially formed of silicon carbide.
21. (original): The hydrocyclone liner of claim 16 wherein the separation section is substantially comprised of a stainless steel duplex material.
22. (original): The hydrocyclone liner of claim 16 wherein the head section and the separation section are removably affixed by a flange assembly.

23. (original) The hydrocyclone liner of claim 17 wherein the structural support comprises a sleeve formed of a fiber-reinforced epoxy.
24. (original): The hydrocyclone liner of claim 17 wherein the structural support comprises a tubular joint that interconnects portions of the separation section.
25. (currently amended): A liquid/liquid hydrocyclone liner comprising:
 - a head section having a fluid inlet and overflow outlet, the head section containing an involute being substantially formed of a highly erosion-resistant first material; and
 - a separation section having an underflow outlet, the separation section being formed of a second material that is more physically resistant to bending and impacts than the first material, the second material having a resistance to erosion less than the resistance to erosion of the first material.
26. (original): The hydrocyclone liner of claim 25 wherein the separation section is removably affixed to the head section.
27. (original): The hydrocyclone liner of claim 25 wherein the first material comprises tungsten carbide and the second material comprises hardened stainless steel duplex.
- 28.(original): The hydrocyclone liner of claim 25 wherein the head section contains a removable involute insert formed of highly erosion resistant material.